

BEST IN BD – AN ASSISTANT TO CHOOSE THE BEST SERVICE IN BD

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

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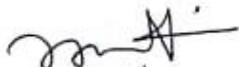
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DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Shah Md Tanvir Siddiquee, Senior Lecturer, and Department of Computer Science and Engineering** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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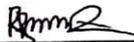
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ABSTRACT

Our project title “Best In BD – An Assistant for choose the best service in BD” is a web based project which is for compare institute, hotel, hospital and tour places in Bangladesh and get the best result of them. We have also designed a discuss forum where people can able to ask their questions and others people can be able to help them to give answer the questions. In this modern era when people want to get any service like they want to get admission in college or university then at first, they want to learn the reputation, quality and many other information’s whose decides whether it is fulfil their requirements or not and also they want to learn similar institute and want to get differences between them. Our big focus is health care. Village people always afraid to come in the city for checking their health condition and treatment because they don’t know which is the best for their treatment, like someone want to do their ulcer treatment now so they need to know which is the best and where is the location of this hospital. Then they need to know near location hotel list and price of the room for stay, after calculating all calculation then they can easily decide which will be the best for their treatment. We also designed a forum where people can ask any type of question and other people can be able to give answer of these questions.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In this modern era people are always trying to get most of the information from the internet. When a guardian wants to admit their child to a school, college or university they must firstly learn these institutes and most of the time they can't get the actual information whose can make them happy.

To overcome this problem, we need a system where people can filter their requirements and get suggest of some good school, college or university lists and they can compare them with others and get a smart solution.

Same as need for hospital, hotel. If there have a system where people can learn about all hospitals, hotels in a location/city then they must be helpful. They can choose a hospital for treatment and can choose a nearest hotel for stay.

People are always trying to go for tour but most of the people doesn't know all the places of our districts/sub districts. We need to make a system whose tell us all the best places and facilities.

We will build a system where people get all services that I included in top. We also make a discussion forum where people can ask questions and experience people can be able to help them to give answer of their questions.

1.2 Motivations

In Bangladesh at this present time we couldn't find any website which contains all the information's of institutes, hospitals, hotels and tour places and compare with them with nearest others.

- All of the hospital related information (Places, departments, doctors, treatments, nearest hotels, Restaurants, Google Map and Suggestions) in one platform.
- A platform of institutes and their necessaries information for compare and choose a best institute like school, college or university.

- From our real-life experience whenever we planned for tour, we didn't find a site which contains all the tour places list and their information and comparisons system of many places in a single view, we are like to work to solve this problem.
- Without the help of any physical people guidance anyone can easily decides and plan to get the best institute, hospital, hotel and tourist place.
- A discussion forum where people can ask questions related to institute, hospital, hotel and tourist place.
- We are like to make it a business platform by affiliating hotel, Google AdSense and earn promoting services.

1.3 Objectives

- Focus on main attractions is comparing the institute, hospital, hotel, tourist place lists and get a big information of them which make people to go forward.
- Identify hospitals by filtering with requirements and get information of all hospital and nearest hotel list through the map.
- Information about district and sub district all hotels as well as their room quality and prices.
- List of all tour places by filtering many options and linking them to the best tour agent.
- Suggestions the best institute with department, certificate, ranking, students, rating and quality wise.
- Google map for locate location of the all services.
- Discussion forum for ask and answer the questions.

1.4 Expected Outcome

This application gives institute, hospital, hotel and tour place related data and people are able to compare and filter them with many options. An example people can get a suggestion of hospital lists with nearest hotel lists with information and prices from their requirements. The cutting-edge world is becoming too quick. Remembering it, we make such a site where people can make his/her own decision and get ready to

accumulate best institute, hospital, places, hotels, suggestions and maps. Discussion forum where people can ask their question and get the answer from others. As per request of quick Bangladesh the site will be moved forward.

1.5 Report Layout

In this report we have made whatever is let well enough alone for part as tails we have talked about application motivations, objectives, and outcomes in Chapter 1. Then we have talked about background with related works, comparative studies, scope of the problem, and challenges in Chapter 2. Then in chapter 3 requirement specification, we have discussed about system design, use case modeling and description, UML diagram and design requirements of web management. In Chapter 4 we have talked about design specification. In this section we have discussed about front end design, back end development, interaction design and UX design, project overview, implementation requirement. After that in Chapter 5 we conversed approximately how-to implementation and testing. In this section we have deliberated implementation of database, security, implementation of front end design and back end design, implementation of interactions, testing implementation, test results and reports. Chapter 6 is about end and our future degree what we will do in straightaway. Toward the end part there are references and index too.

CHAPTER 2

BACKGROUND

2.1 Introduction

At the present time people are like to know all information before they do any step. When a student like to admit a university then at first, they must search internet by their selected department. Because they want to learn about many universities for this department. They want to check the university quality, ranking, achievement, cost, campus, students and so on. But now at present time it is rare in our country where we can get all of these staffs in one view. Village people always afraid to come in the city for checking their health condition and treatment because they don't know which is the best for their treatment, like someone want to do their cancer treatment now so they need to know which is the best and where is the location of this hospital and comparisons of others hospital. Then they need to know near location hotel list and price of the room for stay, after calculating all calculation then they can easily decide which will be the best for their treatment. So, we need to make a system where people can get all the services that mentioned on the top. Sometimes people ask many questions in many forum sides to get suggestion, so we will make a discussion forum where people can ask questions relation to our services and they will get the answer of question.

2.2 Related Works

If we want to check institute, hospital, hotel, tour place and more in one website or application in the internet with compare technology then we may not find several websites which contains all staffs that we mentioned above in one website. We find some websites that have individual systems for them like for tourist or visitor we find many websites where they can learn about new attractive and historical places, how to go, where to live and eat. But it is matter for disappointment that we didn't find websites about institute, hospital and nearest hotel list and comparison system all in one. There is only few website or application which contains information about institutes, hospital, places, hotels information systems in our country such as bengaltours.com, trip2bangladesh.com, nijhoom.com, discoverybangladesh.com, tours.com.bd etc.

These websites or applications provides some short of information so they can't able to decide a decision. Some sort of information of these websites or applications are given below to gather knowledge which contains information about institutes, hospital, hotel and tour place.

2.2.1 tripadvisor.com

TripAdvisor, the world's biggest travel site*, empowers voyagers to release the maximum capacity of each outing. With more than 730 million audits and assessments covering the world's biggest choice of movement postings around the world – covering roughly 8.1 million housing, aircrafts, encounters, and eateries – TripAdvisor furnishes voyagers with the insight of the groups to enable them to choose where to remain, how to fly, what to do and where to eat [1].

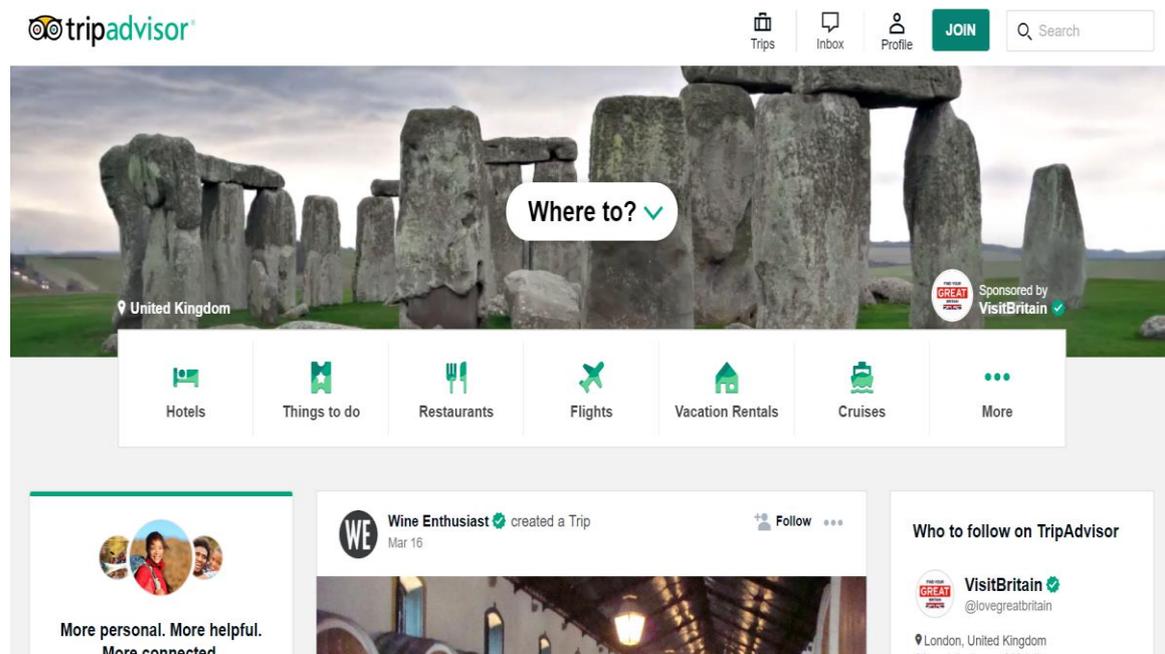


Figure 2.1: Tripadvisor

2.2.2 hotel.com.bd

HOTEL.COM.BD is one of the quickest developing on the web travel entrances in Bangladesh, offering voyagers a broad determination of lodgings, exercises and travel administrations to meet each financial plan and exercises of each sort at focused rates. With more than several inn accomplices around the Bangladesh and a far reaching offering of flight stock made accessible on the site, explorers can book all that they

requirement for a vacation – rooms to meet each financial plan, exercises of each sort and travel administrations to supplement [2].

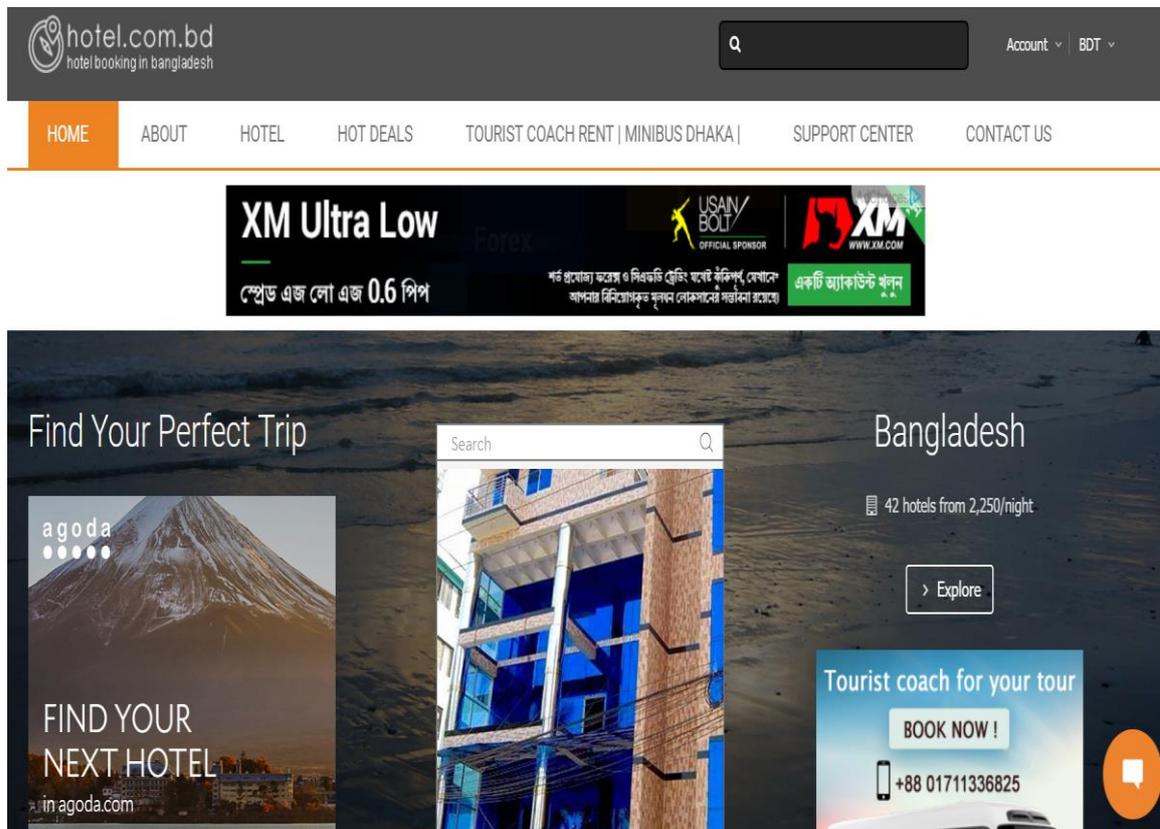


Figure 2.2: hotel.com.bd

2.3 Comparative Studies

Before going to develop our system, we go through almost all website and we discover some vital features as example institute/hospital departments, hotels, rooms, destinations. But there is no one exist which has all complete information that is needed by peoples or visitor. By studying those sites, we get some idea that is really essential for people and we try to implement our application or site having those features which are required. We have also added most new features like hospitals and hospital facilities, department details, nearby places and hotels as well as restaurants, cafe, price and to find the exact location we have also added Google map as well. It is excessive indication to implement this system and broadcast this in our country.

2.4 Scope of the Problem

After inquiry the website, we find some problems it is a web-based project. So, for access in the website they need computer/phone and internet. If anyone haven't these things, then they can't find out the site. Next to these are additionally over the top expensive and some territory have web office also. In this way, this can make issue moreover.

2.5 Challenges

We face some challenges while implementing our application or project. We mainly focused on user or visitor for their attraction and consummation. For this reason we follow some requirements,

- UI and UX design
- Real data
- User requirement filtering system and comparing system
- Safety
- Performance
- Legal risk & Validation

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Business process modeling (BPM) in business process the board and structures building is the activity of addressing systems of an undertaking, with the objective that the present technique may be inspected, improved, and mechanized. BPM is usually performed by business agents, who give capacity in the exhibiting discipline; by point masters, who have explicit learning of the techniques being shown; or even more by and large by a gathering including both. Then again, the system model can be gotten clearly from events' logs using process mining gadgets [3].

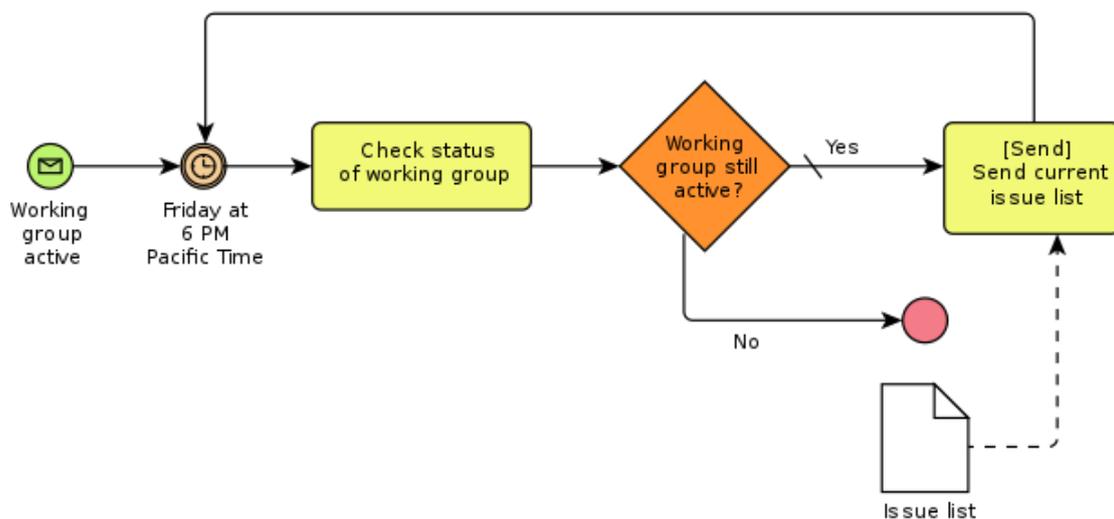


Figure 3.1: Business process model

The business objective is normally to grow process speed or reduce process span; to assemble quality; or to decrease costs, for instance, work, materials, scrap, or capital costs. Before long, an organization decision to place assets into business process showing is every now and again roused by the need to record requirements for an information advancement adventure.

Change the board programs are ordinarily included to incorporate any improved business forms. With advances in programming plan, the vision of BPM models

winding up completely executable (and fit for reproductions and round-trip building) is coming nearer to the real world.

3.2 Requirement Collection and Analysis

Our web application prerequisite is the establishment of our venture. The prerequisite of this application is additionally rule for the improvement of the web application.

Introductory Requirement

The point of the venture is to structure and assemble a web application which will help a people in different way.

- This framework must capacity as equipped for catching information with manual communication.
- This framework must convey ongoing business sector patterns. To do this, the framework should always screen and recover showcase information from web.
- This framework will make networks which will general individuals make a system.
- This framework will improve the present work process and will transform into a dynamic procedure by which individuals can without much of a stretch speak with one another from anyplace or from wherever.
- The customer side application must be fit for getting notice and associated with ongoing database that they can naturally associated with database.

User/admin Requirements

- The user no need to registration to see all the module which is in the app and get various information which will be very much helpful.
- The admin has to registration first then the admin can monitor the system.so, the system be secure and admin will capture news item and will update it.
- When a user asks the question in our forum site then at first our admin after approving it will publish in our discussion board.

Hardware Requirements

Ideally this web application is usually for the web based application. So, anyone who are using computer/phone and internet he can use this web app.

Software Requirements:

- A web server will be providing web access to data in a database to the admin and users
- Visual studio code which is the main software to make this system update day to day.
- As a user level they need internet and smart device.

3.3 Use Case Modeling and Description

The Use Case Model depicts the proposed handiness of the new system. A Use Case addresses a discrete unit of correspondence between a customer (human or machine) and the structure. A Use Case is a single unit of vital work; for example, login to system, register with structure and make demand are all Use Cases. Each Use Case has a depiction which delineates the handiness that will be worked in the proposed structure. A Use Case may 'join' another Use Case's helpfulness or 'expand' another Use Case with its very own direct. Use Cases are commonly related to 'performing craftsmen'. An on-screen character is a human or machine component that interfaces with the structure to perform essential work. What the system, performing craftsman and use case look like are offered underneath to make it less difficult for structure an UML diagram. If anyone understand these things well, by then it is straightforward for him/her to fathom the whole diagram and it amasses a web application simpler, trustworthy and logically exact [4].

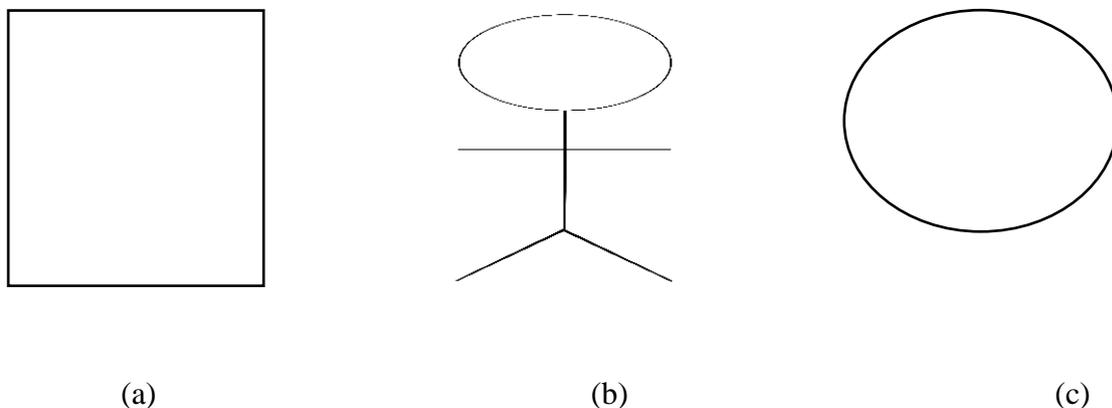


Figure 3.2: (a) System, (b) Actor and (c) Use Case

An actor is a person or thing they utilize our framework to accomplish an objective. It could be an individual, an association, another framework or an outer gadget. So, in our undertaking the most critical actor is an understudies, patient, watchman and traveler since they are going to utilize our framework. Another actor is the administrators. The administrators will give all the information's. A utilization case is absconded with oval shape, speaks to an activity that achieves the assignment inside the framework [4].

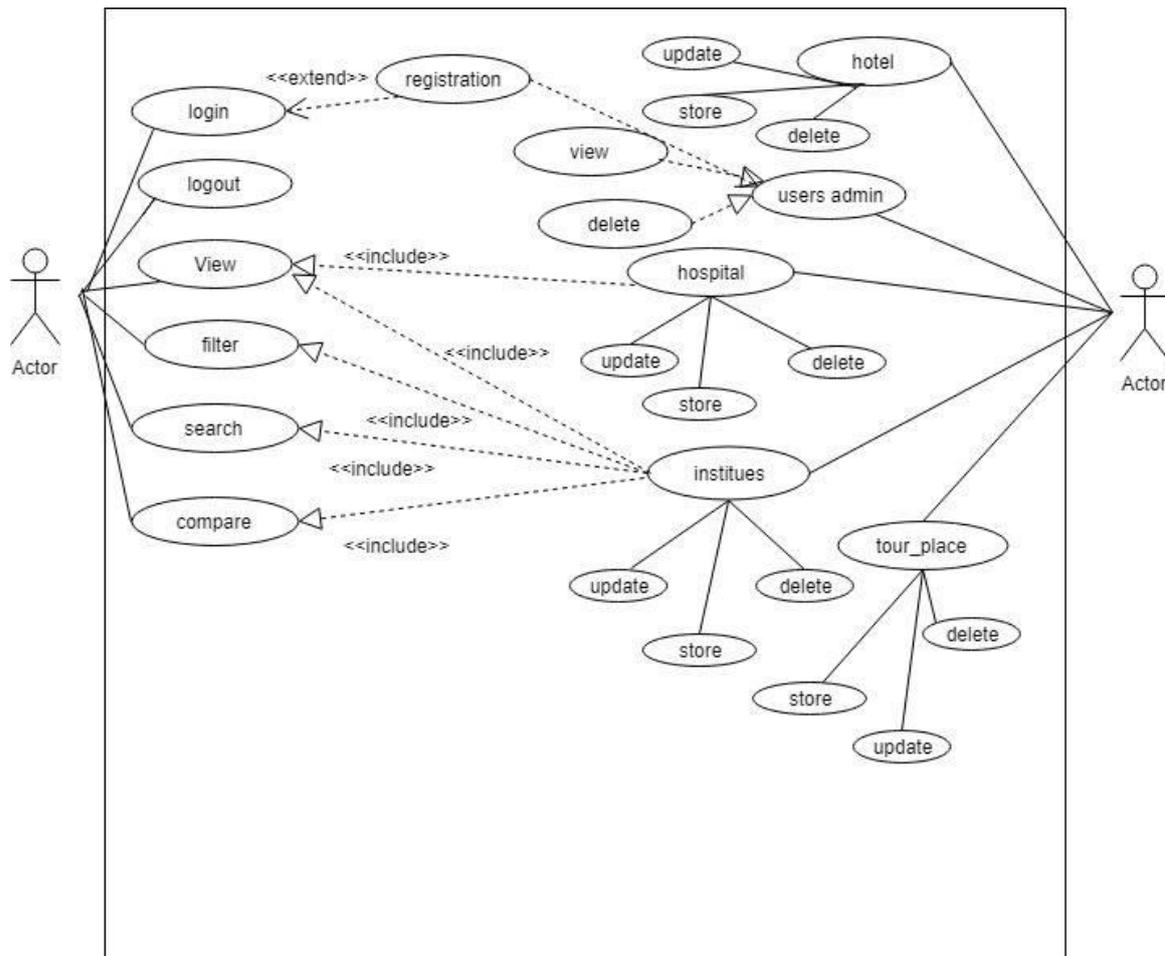


Figure 3.3: Use case diagram

3.4 Logical Data Model

A logical data model or logical outline is a data model of a specific issue region imparted self-governingly of a particular database the official's thing or limit development anyway with respect to data structures, for instance, social tables and sections, object-organized classes, or XML names. This is rather than a hypothetical data model, which delineates the semantics of a relationship without reference to development [5].

3.5.1 HTML

HTML represents Hypertext Markup Language. It enables the client to make and structure segments, passages, headings, joins, and blockquotes for website pages and applications.

HTML isn't a programming language, which means it doesn't be able to make dynamic usefulness. Rather, it makes it conceivable to compose and design records, comparably to Microsoft Word [7].

3.5.2 A Sample Example of HTML

The common template using HTML is to print something.

```
<!DOCTYPE html>

<html>

  <head>

    <title>Best In In - An assistant to choose best service in BD</title>

  </head>

  <body>

    <section class="hospital">

      <h1>Discover the hospitals</h1>

      <p>Choose your hospital</p>

      <a href="bestinbd.info/hospital.html">Go</a>

    </section>

  </body>

</html>
```

3.5.3 CSS

Cascading Style Sheets, tenderly implied as CSS, is a direct arrangement language intended to rework the path toward making site pages decent.

CSS handles the look and feel some part of a site page. Using CSS, you can control the shade of the substance, the style of content styles, the isolating between areas, how portions are apportioned and spread, what establishment pictures or tints are used, group structures, assortments in feature for different contraptions and screen sizes similarly as a combination of various effects [8].

3.5.4 A Sample Example of CSS

The common ureses of CSS for change design.

```
Tag name/ class name/ id name {
```

```
properties: value;
```

```
}
```

Design a section:

```
.hospital{  
    width: 100%;  
    clear: both;  
    background-color: #eeeeee;  
    color: #ffffff;  
    box-shadow: 3px 1px 4px 2px #c9cccd;  
    margin-bottom: 10px;  
}
```

3.5.5 PHP Language

PHP started as a little open source adventure that created as a regularly expanding number of people found how supportive it was. Rasmus Leadoff discharged the main type of PHP way in 1994. PHP is a recursive shortening for "PHP: Hypertext Preprocessor". PHP is a server-side scripting language that is embedded in HTML. It is used to manage dynamic substance, databases, session following, even form whole internet business online store or registry website [9].

3.5.6 Benefit of Using PHP

PHP has stayed a standout amongst the most adaptable and down to business web development languages on the planet today. Its scope of functionalities, astounding exhibit of add-ins to broaden functionalities, its open source nature and colossal online network support has made PHP a perpetual most loved among amateurs just as built up development offices around the world. PHP is viewed as one of the simplest scripting languages.

3.5.7 System Requirement for using PHP

- **Operating System:** Linux, Unix, Windows
- **Web Server:** Apache Web Server
- Minimum 350MB Hard Disk space for installation

3.5.8 Laravel PHP Framework

Laravel is an open-source PHP framework, which is powerful and straightforward. It pursues a model-view-controller configuration design. Laravel reuses the current segments of various frameworks which helps in making a web application [10].

3.5.9 Reasons to use Laravel

- Laravel is appropriate when creating applications with complex backend necessities, regardless of whether little or extensive. Introducing Laravel has been made simpler by the presentation of Homestead, a prepackaged, across the board vagrant box.
- It's a PHP framework brimming with highlights that will enable you to tweak complex applications. Among these: consistent information movement, MVC design support, security, directing, view format motor, and confirmation, among numerous others.

3.5.10 Vue.js JavaScript Framework

Vue is a dynamic system for structure UIs. In contrast to other solid systems, Vue is planned starting from the earliest stage to be gradually adoptable. Then again, Vue is additionally superbly fit for driving advanced Single-Page Applications when utilized in mix with present day tooling and supporting libraries [11].

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front End Design

We use HTML, CSS, JavaScript and jQuery, Vue.js code to design & create our website client interface. In our CMS web application, we have three side one is Dashboard (control panel) second one is client side (home site) and another one is discussion side (Forum).

4.1.1 Client Side: Home Page

When a user or client enter our base URL or site name then they can see our home page.

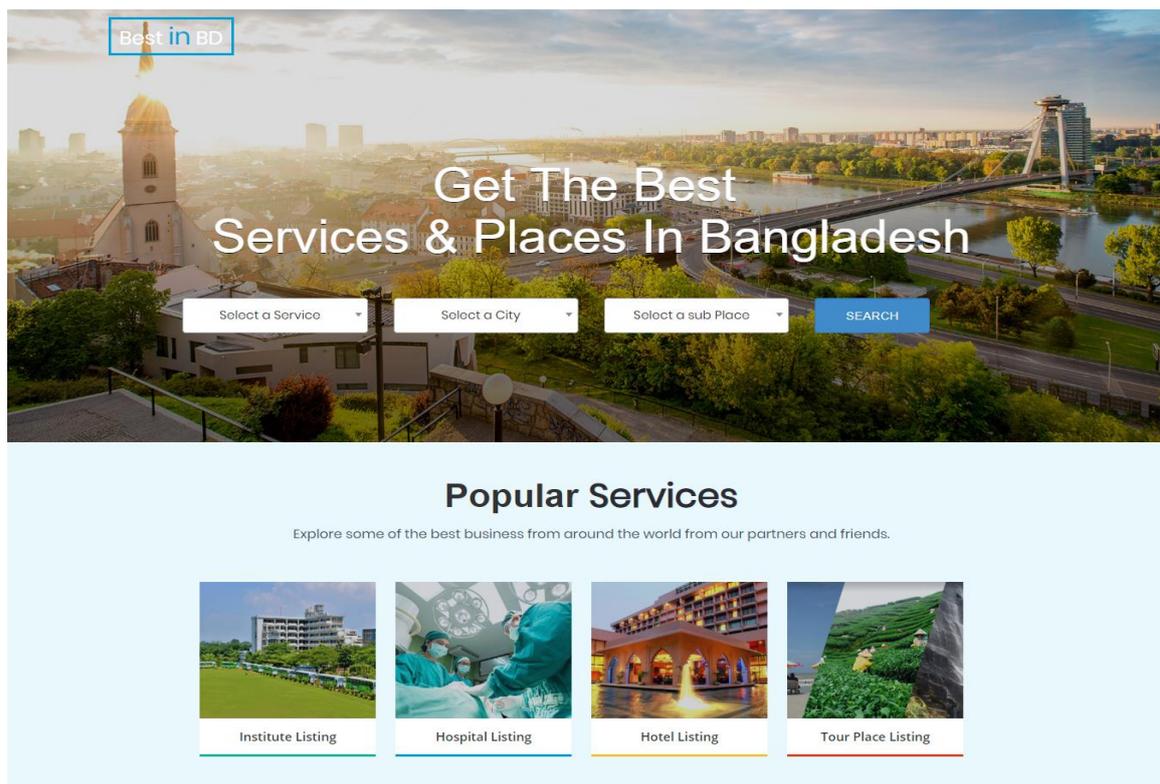


Figure 4.1: Home page

Top Public & Private Universities In Your Country

Explore some of the best institutes from around the Bangladesh for good education.

 <p>Rajshahi University 7 Departments City Corporation Road</p>	 <p>Brack University 3 Departments 66, Dhaka 1212</p>
 <p>Shahjalal University of Science and Technology 6 Departments University Ave, Sylhet 334</p>	 <p>Daffodil International University 5 Departments 4/2, Sobhanbag, Mirpur Rd, Dhaka 1207</p>
 <p>University of Chittagong 13 Departments Chittagong University Road, suburban area of Hathazari</p>	 <p>North South University 3 Departments Plot, 15, Block 8 Kuril - NSU Rd, Dhaka 1229</p>
 <p>Dhaka University 12 Departments Nikhet Rd, Dhaka 1000</p>	 <p>American International University-Bangladesh 2 Departments 408/1, Kuratoli, Dhaka 1229</p>

Find You Hospital For Best Treatment In Your Contry

Explore some of the best hospitals for treatment from around the Bangladesh from our partners

 <p>Bangabandhu Sheikh Mujib Medical University PG Hospital, Shahbagh Rd, Dhaka 1000</p>	 <p>Rajshahi Medical College Hospital Medical College Road, Rajshahi 6000</p>	 <p>Dhaka Medical College and Hospital Bakshibazar area, Dhaka 1000</p>	 <p>Sylhet MAG Osmani Medical College Hospital Osmani Medical, Sylhet</p>
 <p>Square Hospital 18/F, Bir Uttam Qazi Nuruzzaman Sarak West, Panthopath, Dhaka 1205</p>	 <p>Popular Medical Center Sylhet Sadar Upazila, Kajokshah, Medical College Rd, Sylhet 3100</p>	 <p>Samarita Hospital 89/1 Panthopath, Dhaka 1215</p>	 <p>BIRDEM General Hospital 122 Kazi Nazrul Islam Ave, Dhaka 1000</p>

Figure 4.2: Home page

Check Hotel For Stay At Night In Bangladesh

Explore some of the best hotel from around the Bangladesh from our partners and friends.



Watch The Beauty Of Tour Places In Bangladesh

Explore some of the best tour place from around the Bangladesh.

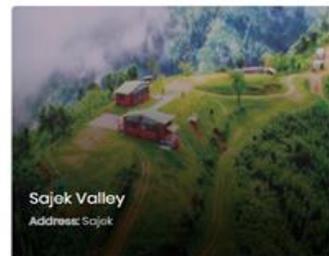
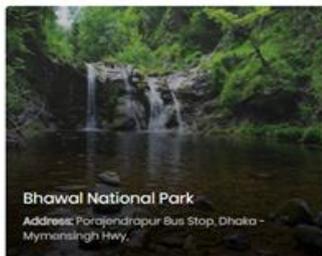


Figure 4.3: Home page

4.1.2 Client Side: Institute Comparing Page

When user click our institute, hospital, hotel or tour place category then they can able to see our latest listing. They can select the listings and can compare them. They can able to filters them by department, rating, feedback and more.

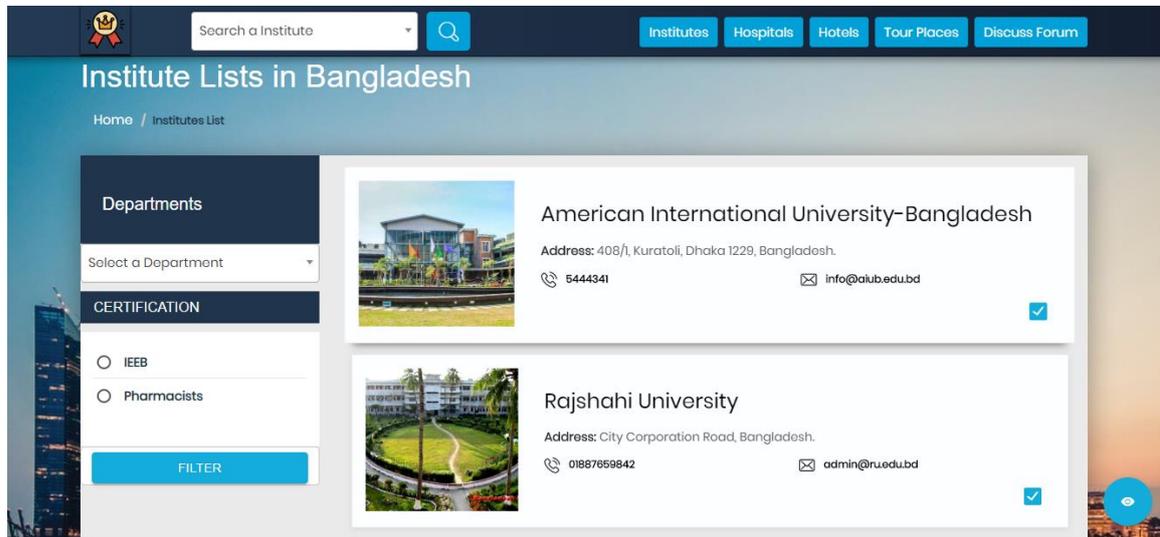


Figure 4.4: Institute comparing page

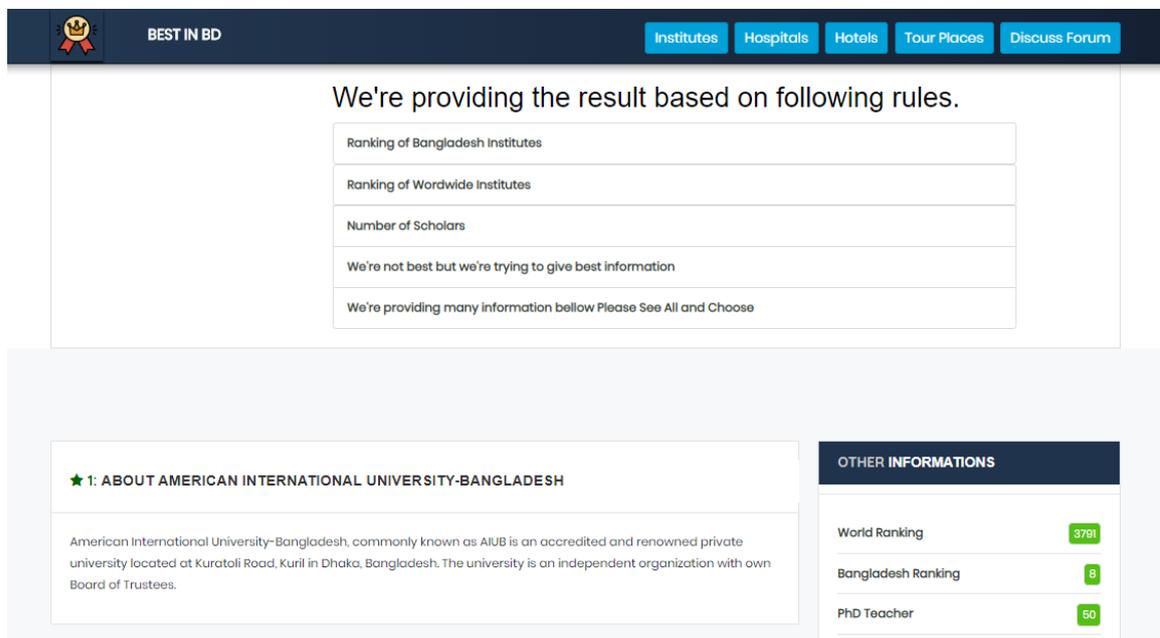


Figure 4.5: Institute comparing page

4.1.3 Client Side: Single Page View

When people click a single institute, hospital, hotel or tour place they can able to see all details of them.

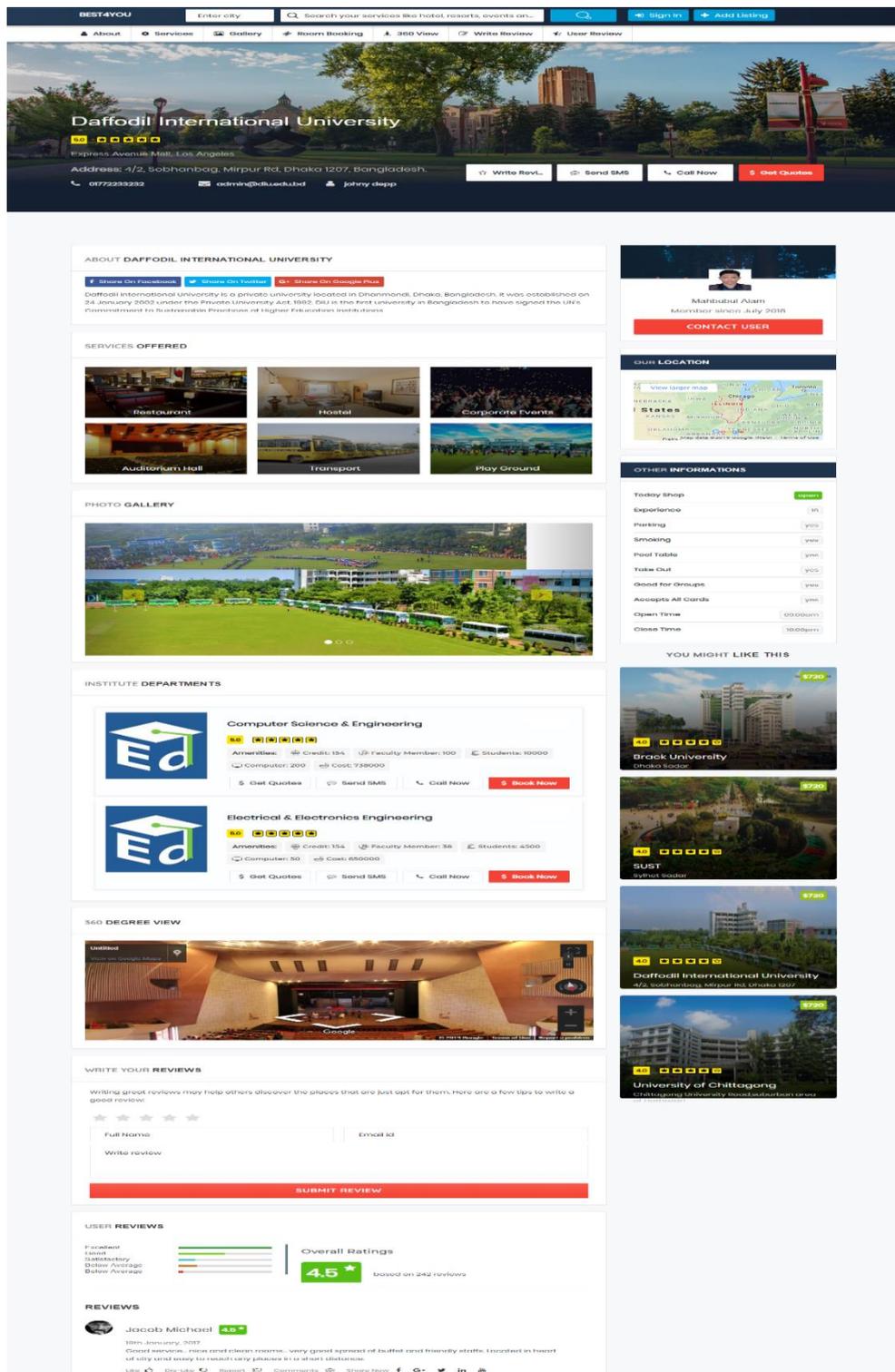


Figure 4.6: Gallery

4.1.4 Forum: Home Page

When someone click our forum-discussion URL then they can able to see previous questions. They can see them category wise and they can search question as well. They can also post a new question and others can able to answer them.

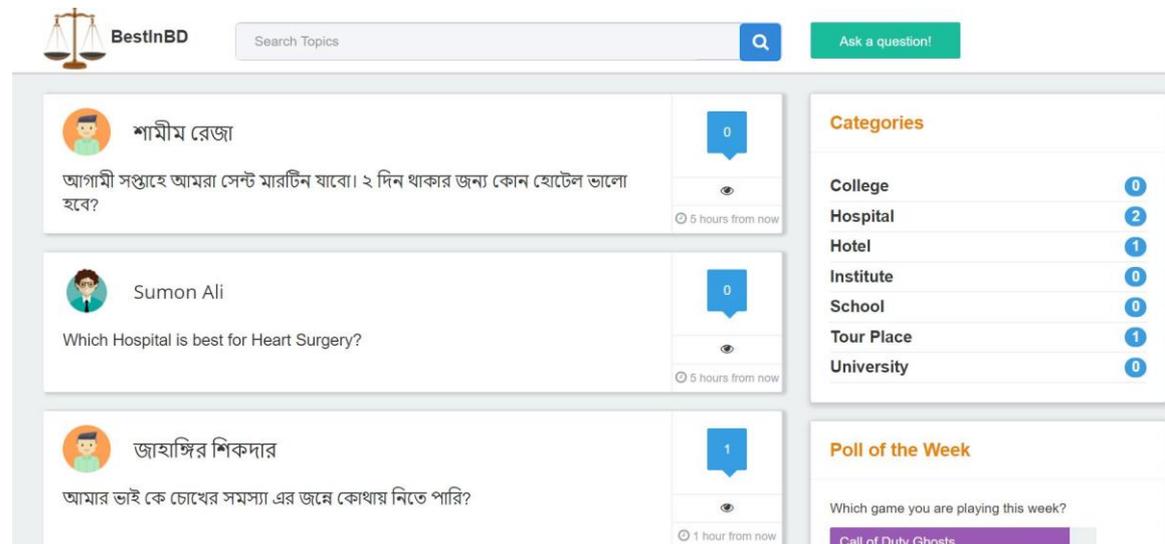


Figure: 4.7 Forum home page

4.2 Back End Design

The admin or author can control all work, for example, they can Insert, Update, Delete, and control all data.

4.2.1 Dashboard: Admin Registration

When a user want to be our admin, author or standard user then we have one option, They can register through our register page and after email verification they can logged in but when author make him editor or admin then they can access all facilities.

Best In BD Login Register

Register

Name

E-Mail Address
Please set your gmail name

Password
Password must be 6 character

Confirm Password

[Register](#)

Figure 4.8: Registration page

4.2.2 Dashboard: Admin Login

When a user approved by the admin team then user can be able to do admin tasks after given login information.

Best For You in BD Login Register

Login

E-Mail Address

Password

Remember Me

[Login](#) [Forgot Your Password?](#)

Figure 4.9: Login page

4.2.3 Dashboard: Admin Profile

When a user logged in in our dashboard then they can able to see and change his profile information

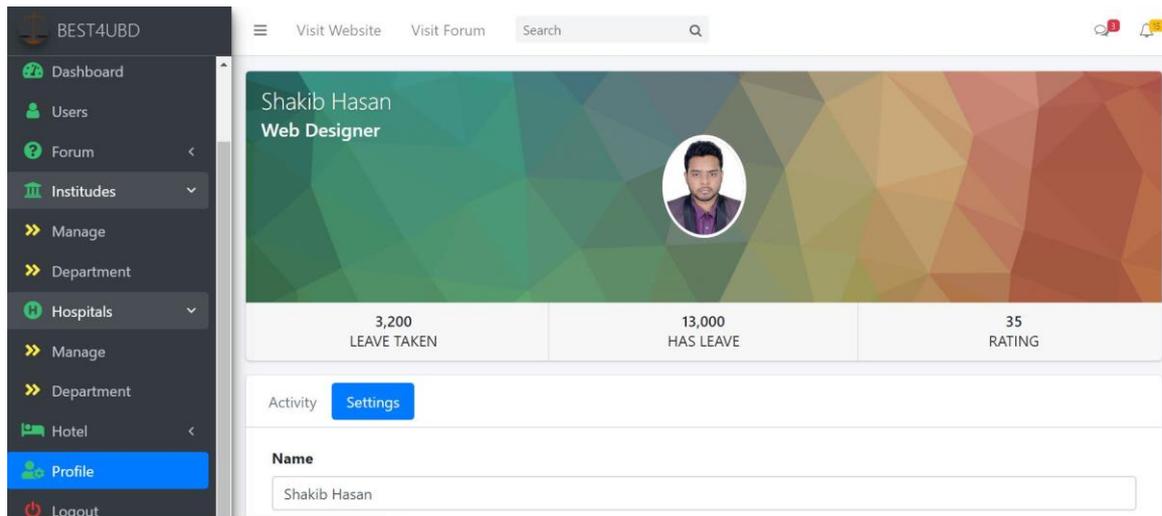
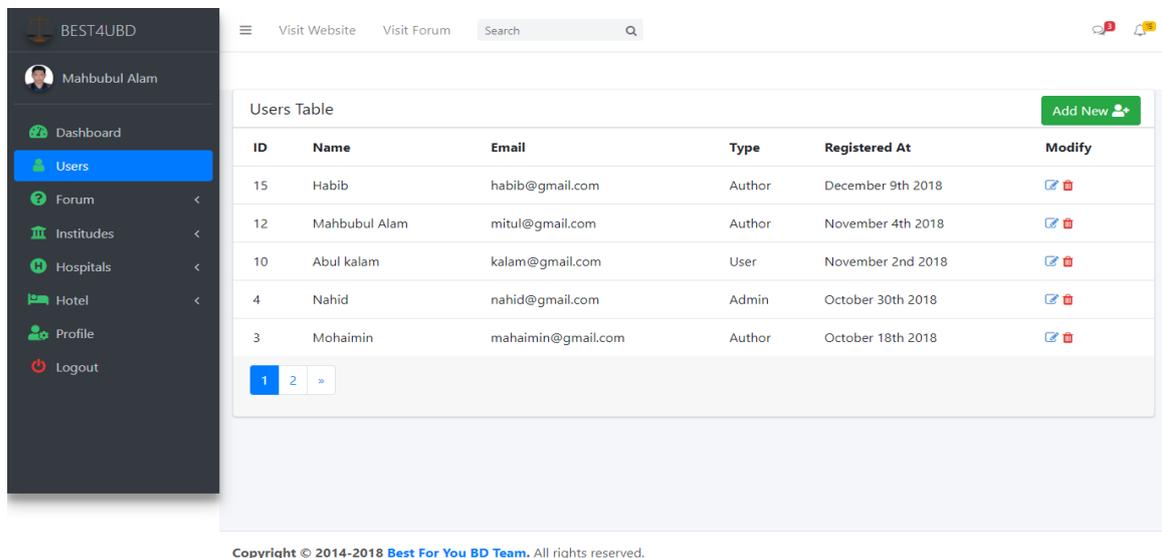


Figure 4.10: Admin profile

4.2.4 Dashboard: User List

When an author or administrator logged in in our dashboard then they can able to see the dashboard user list



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Figure 4.11: Admin profile

4.2.5 Dashboard: Manage Listing

We want to create listing of institute, hospital, hotel and tour places then need to design them like manage, create, edit & delete page

Name	slug	isActive	Modify
Bangla	bangla	Active	Edit Delete
Commmarce	commmarce	DeActive	Edit Delete
CSE	cse	DeActive	Edit Delete
EEE	eee	Active	Edit Delete
English	english	Active	Edit Delete
Farmacy	farmacy	Active	Edit Delete
LAW	law	Active	Edit Delete

Figure 4.12: Department information

4.2.6 Dashboard: Manage Universities

Admin can create, manage, update and delete Departments

S.N	institute Name	Type	Status	Established At	Modify
1	Brack University	University	Active	March 2nd 1998	Edit Delete
2	Daffodil International University	University	Active	March 1st 2002	Edit Delete
3	Dhaka University	University	Active	March 2nd 1921	Edit Delete
4	North South University	University	Active	March 4th 1997	Edit Delete
5	Rajshahi University	University	Active	March 2nd 1956	Edit Delete
6	SUST	University	Active	December 8th 1994	Edit Delete
7	United International University	University	Active	July 8th 2003	Edit Delete

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Figure 4.13: University management

4.2.7 Dashboard: Add New Listing

When we want to create a new listing then we can able to do that by clicking Add New button.

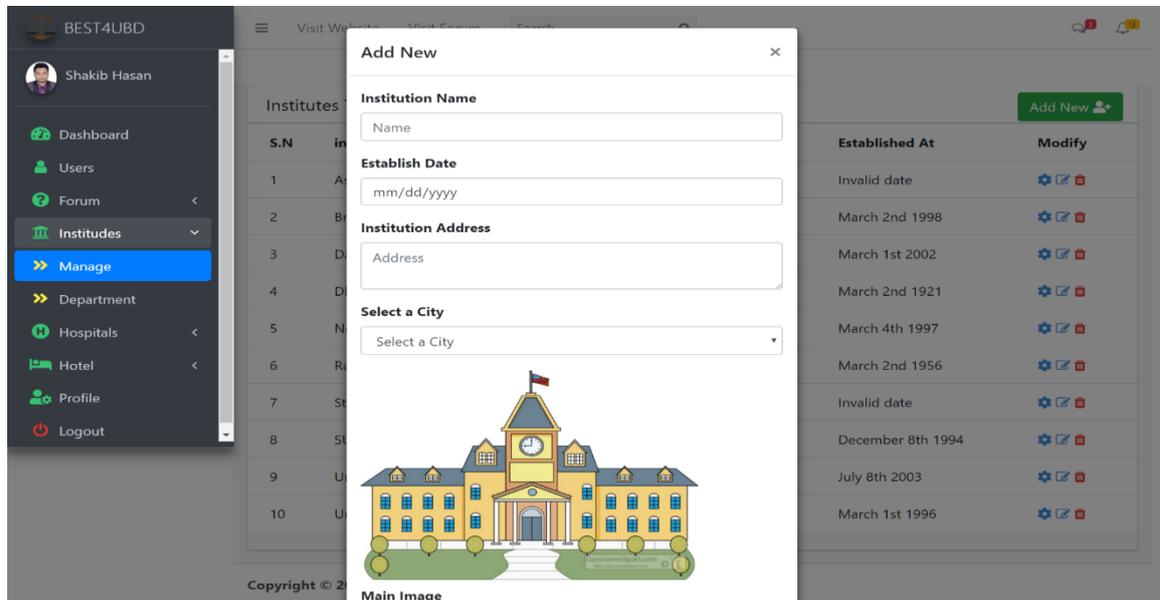


Figure 4.14: Add listing

4.2.8 Dashboard: Update Listing

When need to update any listing then we can able to by click edit button.

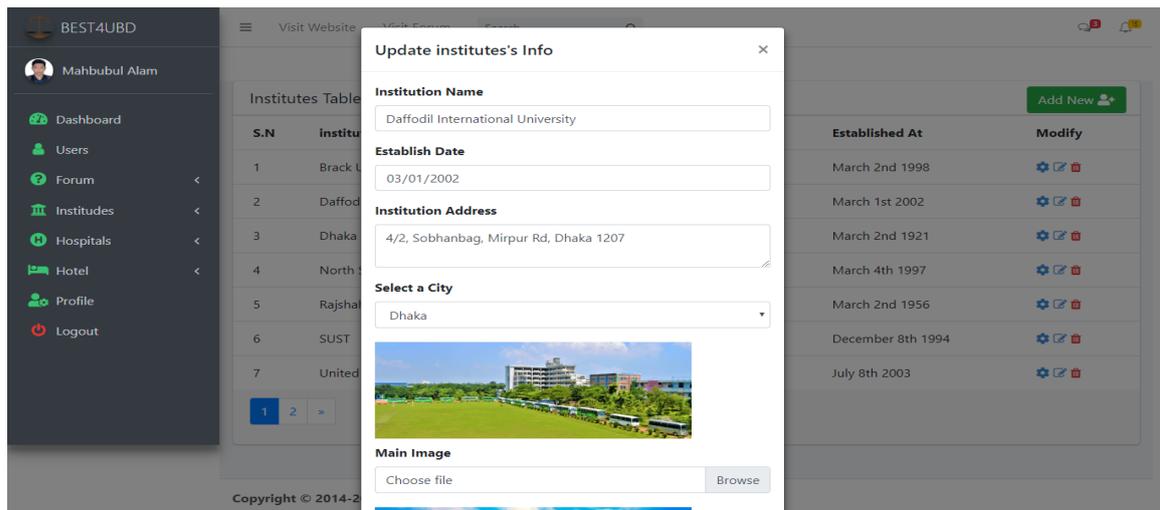


Figure 4.15: Update listing

4.2.9 Dashboard: Delete Listing

When we need to delete any listing then after clicking delete icon they system ask for confirmation and after confirm system delete the list.

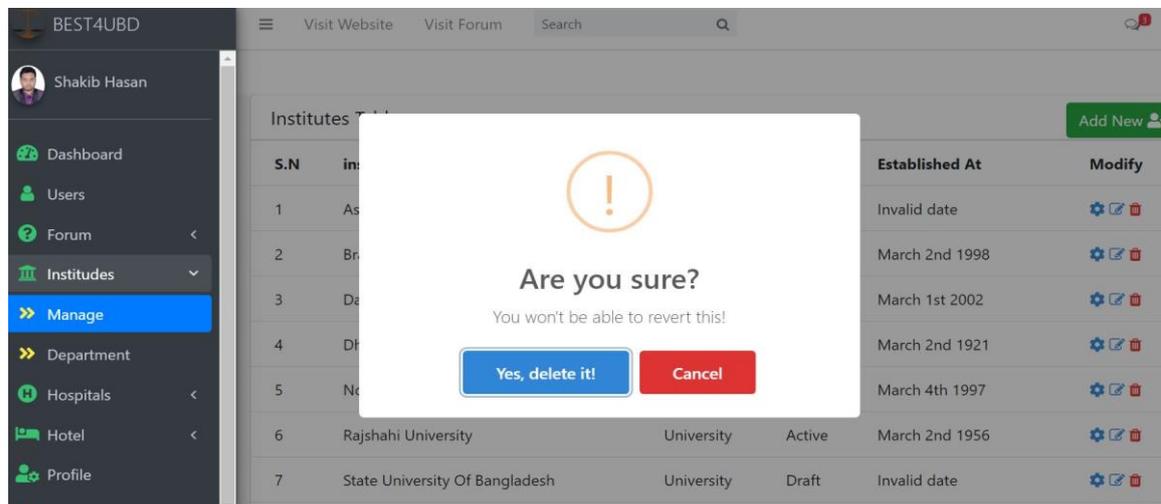


Figure 4.16: Delete listing

4.2.10 Project Overview

Our site is for the most part dependent on data. We give a colossal measure of data and furthermore recommend best administrations. This site is easy to use and can use anybody.

4.3 Interaction Design and UX Design

Interaction Design is a piece of UX design. Interaction design accentuation on making interfaces with well idea. UX design is one sort of procedure making item which give applicable and significant experience to a client. Most likely that development molded by interaction designer need to preliminary around utilization of user experience design improvement.

4.3.1 User Experience Design

User experience design is one sort of procedure making item which give significant and important experience to a user. Visual design, communication design, user look into, data engineering and so on are components of user experience design.

4.4 Implementation Requirements

To complete our project, we select following tool and software and use,

- HTML5
- CSS3
- Bootstrap
- PHP7
- Laravel PHP framework
- Apache
- PDO
- JavaScript
- Vue
- Ajax
- jQuery
- XAMPP
- Visual Studio Cod

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

A database management system (DBMS) is framework programming for making and directing databases. The DBMS outfits clients and designers with a precise technique to make, recoup, update and supervise data.

A DBMS makes it useful for end clients to make, read, update and eradicate data in a database. The DBMS essentially fills in as an interface between the database and end clients or application programs, ensuring that data is dependably dealt with and remains adequately accessible. The DBMS directs three basic things: the data, the database engine that empowers data to be gotten to, catapulted and changed - and the database development, which portrays the database's reasonable structure. These three crucial parts help give concurrence, security, data decency and uniform association techniques. Conventional database association assignments supported by the DBMS join change the board, execution watching/tuning and fortification and recovery. Various database the board frameworks are in like manner accountable for motorized rollbacks, restarts and recovery similarly as the logging and assessing of development. Architectural design of this application or system development in shown in Figure 5.1

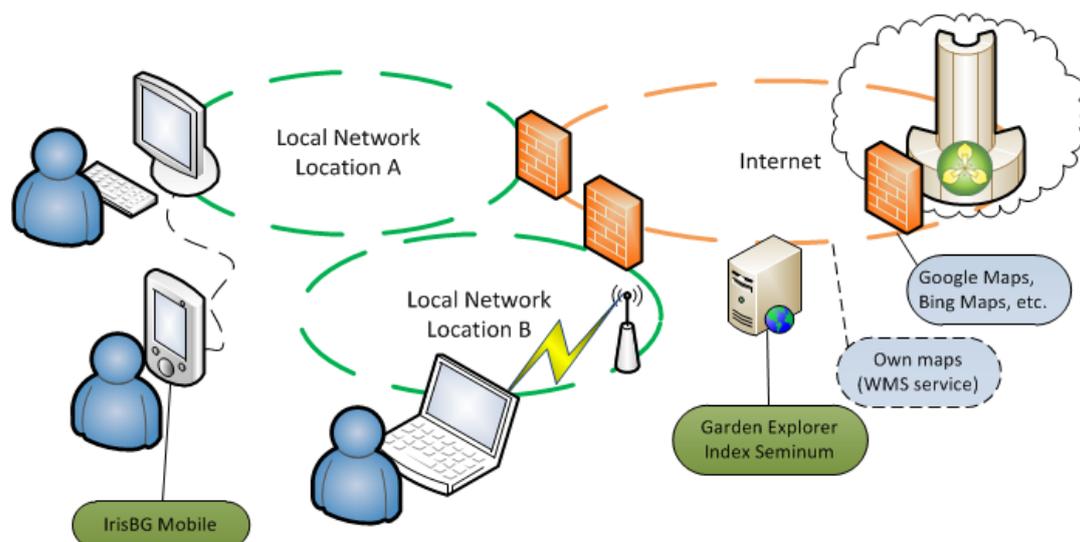


Figure 5.1: Architecture Design

5.1.2 Database Design

Database design is the relationship of data according to a database illustrate. The architect makes sense of what data must be secured and how the data segments interrelate. With this information, they can begin to fit the data to the database show. Database configuration is the route toward conveying a point by point data model of a database. This data exhibit contains all the required genuine and physical plan choices and physical amassing parameters expected to create a structure. Database design of this application or system development in shown in Figure 5.2

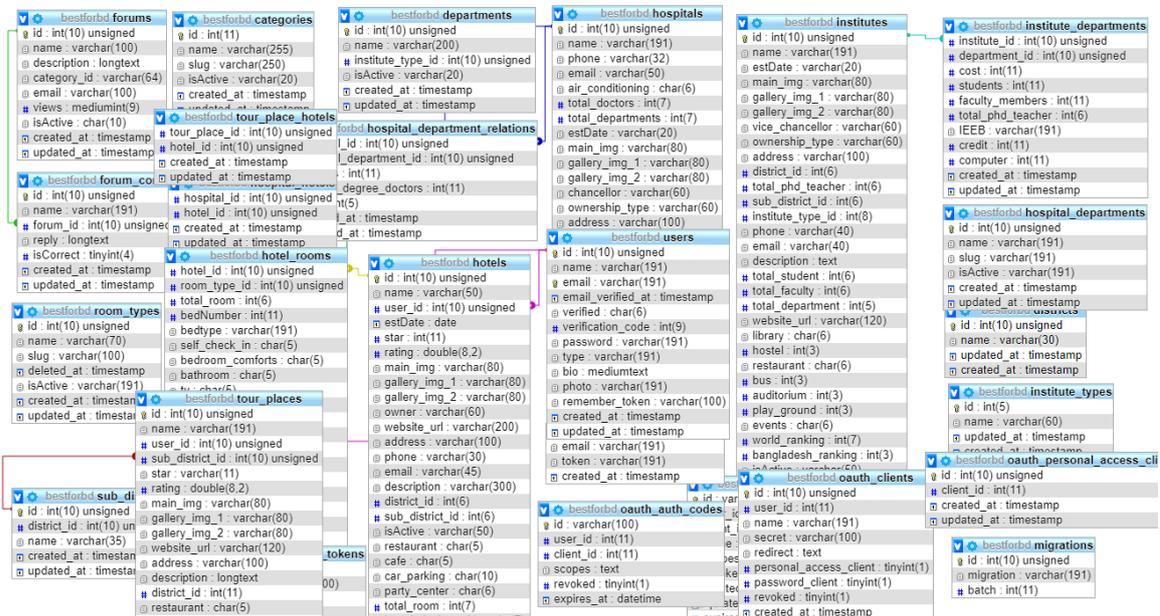


Figure 5.2: Database Design

5.1.3 Implementation of Tools and Software

A software device is a program or application which engineers use to assemble, troubleshoot, support or else keep up different projects and application. These the instruments that anybody can use to make a website page or applications.

We built up our web application or framework by utilizing of the accompanying software and instruments.

- MySQL

- Apache
- XAMPP

5.1.4 MySQL

MySQL is the world's most acclaimed open source database. With its exhibited execution, unfaltering quality, and ease of use, MySQL has transformed into the principle database choice for online applications, used by unmistakable web properties including Facebook, Twitter, YouTube, and every one of the five of the best five websites*. Besides, it is a very outstanding choice as introduced database, passed on by an expansive number of ISVs and OEMs [12].

5.1.5 Apache

Apache is the most extensively used web server programming. Made and kept up by Apache Software Foundation, Apache is an open source programming available in vain. It continues running on 67% of all webservers on the planet [13].

5.1.6 XAMPP

XAMPP is a free and open-source cross-organize web server course of action stack group made by Apache Friends, involving predominantly of the Apache HTTP Server, MariaDB database, and middle people for substance written in the PHP and Perl programming lingos [14].

5.1.7 Security

Web application security is a focal segment of any online business. The worldwide idea of the Internet opens web properties to assault from various areas and different dimensions of scale and multifaceted nature. Web application security manages the security encompassing sites, web applications and web administrations, for example, APIs.

5.1.8 Https

Hypertext Transfer Protocol Secure (HTTPS) is a growth of the Hypertext Transfer Protocol (HTTP). It is used for secure correspondence over a PC sort out, and is commonly used on the Internet. It guarantees against man-in-the-inside attacks. The

bidirectional encryption of exchanges between a client and server secures against listening stealthily and adjusting of the correspondence. Before long, this gives a reasonable insistence that one is bestowing without impedance by aggressors with the site that one intended to talk with, rather than an impostor.

5.1.9 SSL

SSL (Secure Sockets Layer) is the standard security advancement for setting up a mixed association between a web server and a program. This association ensures that all data goes between the web server and projects remain private and essential. SSL [16] is an industry standard and is used by countless in the protection of their online trades with their customers.

5.1.10 Security Algorithm

A security computation is a legitimate methodology used to scramble data. Five common security figuring are Hash Message Authentication Code (HMAC) Message Digest structure (MD5) and HMAC Secure Hash Algorithm (SHA) for approval, and Data Encryption Standard (DES), DES-Cipher Block Chaining (CBC), and Triple DES (3DES) for encryption. Microsoft supports four of these five security computations in Windows 2000 (Win2K) IP Security (IPSec): HMAC MD5, HMAC SHA, DES, and 3DES [17].

5.1.11 Backup

Backup is a standout amongst the most critical for security issue. A site backup is a preview of all your site's critical segments. Backup implies copy of a record, record or other information made whether the essential record, report or information is gone, demolished, crushed, pounded or hacked. Along these lines, in the event that information, record, or other archive is lost or adulterated then we can without much of a stretch recuperate that by utilizing back framework.

5.2 Implementation of Front-End Design

Front-end web progression, generally called customer side improvement is the demonstration of conveying HTML, CSS and JavaScript for a site or Web Application so a customer can see and interface with them truly. The test related with front end improvement is that the gadgets and techniques used to make the front end of a site change in every case in this way the fashioner needs to persistently think about how the field is making. The objective of organizing a site is to ensure that when the customers open up the site, they see the information in an arrangement that is definitely not hard to scrutinize and relevant. This is moreover snared by the manner in which that customers right now use a broad combination of gadgets with fluctuating screen sizes and objectives thusly compelling the designer to consider these points when arranging the site. They need to ensure that their site comes up adequately in different programs (cross-program), unmistakable working structures (cross-stage) and various gadgets (cross-gadget), which requires vigilant envisioning the side of the designer.

5.2.1 Implementation of Tools and Software for Front End

Which tools, software and languages we used for front end design to execute our application are shown in below,

- HTML
- CSS
- JavaScript
- jQuery
- Vue.js
- Bootstrap
- Photoshop
- Visual Studio code

5.2.2 HTML

HTML stands for Hypertext Markup Language. It enables the client to make and structure segments, sections, headings, joins, and blockquotes for site pages and applications [7].

5.2.3 CSS

Cascading Style Sheets warmly implied as CSS, is an essential arrangement language expected to streamline the route toward making site pages satisfactory.

CSS handles the look and feel some bit of a site page. Using CSS, you can control the shade of the substance, the style of content styles, the isolating between segments [8].

5.2.4 JavaScript

JavaScript is a scripting or programming language that enables you to actualize complex things on location pages each time a site page accomplishes an option that is other than stay there and show static data for you to take a gander at indicating auspicious substance invigorates, instinctive maps, vivified 2D/3D structures, investigating video jukeboxes, and so on [18].

5.2.5 jQuery

jQuery is a speedy, little, and feature rich JavaScript library. It makes things like HTML report traversal and control, event dealing with, movement, and Ajax much less troublesome with an easy to-use API that works over a colossal number of projects. With a blend of versatility and extensibility, jQuery has changed the way in which countless make JavaScript [19].

5.2.6 Bootstrap

Bootstrap is a free and open-source front-end web framework. It contains HTML and CSS-based structure designs for typography, frames, catches, route, and other interface parts, just as discretionary JavaScript expansions. As opposed to various earlier web frameworks, it worries about front-end advancement so to speak.

Bootstrap is a web framework that revolves around streamlining the improvement of useful website pages (instead of web applications) [20].

5.2.7 Photoshop

Adobe Photoshop is the predominant photo adjusting and control programming accessible. Adobe Photoshop is a raster plans boss made and dispersed by Adobe Inc. for macOS and Windows. It was at first made in 1988 by Thomas and John Knoll. Starting now and into the foreseeable future, this item has transformed into the

acknowledged business standard in raster plans modifying just as to mechanized workmanship all things considered [21].

5.2.8 Visual Studio Code

Visual Studio Code is a source code supervisor created by Microsoft for Windows, Linux, and macOS. It incorporates support for investigating, implanted Git control, language structure featuring, insightful code fruition, scraps, and code refactoring. Visual Studio Code has out-of-the-case support for pretty much every significant programming language. A few are incorporated as a matter of course, for instance, JavaScript, TypeScript, CSS, and HTML [22].

5.3 Implementation of Interaction

Implementation of Interaction is especially critical to a Web app development. Interaction of a web application or framework is exceptionally imperative. Since without an intelligent plan of the framework no guest will be not intrigued to remain in the webpage or application. Along these lines, for better user experience it is expected to ensure that the structure is attractive. And furthermore, attempt to make a basic and secure site not unpredictable on the grounds that this could make an issue to comprehend and utilize. For responsive Bootstrap is required. This will make the site user-friendly. Consequently, this will pull in more user.

5.4 Testing Implementation

Implementation is the way toward putting an activity for the planned arrangement. Before we actualize, the arrangement ought to have been finished and our destinations ought to be clear. At long last activity defined on that arrangement is called trying implementation [23].

5.4.1 Testing Methodologies

Testing and procedures are utilized to proclaim that testing Application meets client desires. Test Methodologies comprises of non-useful and practical testing to approve

the testing purpose software. These tests are typically composed by the developers and they are really written it before the module is created.

5.4.2 Unit Testing

Unit testing is a product testing strategy by which singular units of source code, sets of at least one PC program modules together with related control information, utilization methods, and working methodology, are tried to decide if they are fit for use. It tends to be done physically however more often than not it is mechanized. The expense of fixing unit testing is lesser in examination so that of imperfections are recognized in all respects obviously [24]. Look at the cost, for example, pulverization, time, mortification, exertion of an imperfection recognized amid programming is live or amid acceptance testing.

5.4.3 System Testing

System testing will be testing led on a total incorporated system to assess the system's consistence with its predetermined necessities. System testing takes, as its information, the majority of the coordinated segments that have passed mix testing. The motivation behind incorporation testing is to identify any irregularities between the units that are coordinated together (called arrays). System testing tries to recognize deserts both inside the "between gatherings" and furthermore inside the system in general. The genuine outcome is the conduct delivered or seen when a segment or system is tried [25].

5.4.4 Acceptance Testing

By acceptance testing, we can discover client needs, necessities, and business forms directed to decide if a system fulfills the acceptance criteria and to empower the client, clients or other approved element to decide if to acknowledge the system. We can utilize testing strategy like Black Box testing technique to see acceptance tasting.

5.4.5 Performance Testing

Performance testing is performed to confirm the server reaction time and throughput under different burden conditions. By performance test, we can test a product performance, for example, to guarantee applications will perform enough great under anticipated remaining burden. We effectively can quantify an application's performance like unwavering quality, reaction time, versatility, asset utilization, etc of framework. The primary reason for performance testing isn't just to discover bugs yet in addition to decrease performance bottlenecks.

5.4.6 Security Testing

Security testing is a procedure expected to uncover defects in the security instruments of a data framework that ensure information and keep up usefulness as planned. Because of the coherent constraints of security testing, passing security testing isn't a sign that no defects exist or that the framework enough fulfills the security necessities. Security testing is essential for any sort of programming that it is secure or not. For the most part this procedure is utilized to quantify the potential vulnerabilities and furthermore to recognize the dangers in the framework. Security testing is valuable for recognizing the likelihood of security hazards in the framework and fixing that sort of issues it helps the designers. It is useful to construct a web application increasingly secure.

5.4.7 Usability Testing

Usability testing is the procedure by which the human-PC cooperation attributes of a framework are estimated, and shortcomings are distinguished for adjustment. By usability testing, we can without much of a stretch find is the framework easy to use and simple to utilize or not. What's more, how much time it takes to finish determined undertakings. It is testing which is confirmed by real clients. It fulfilled the client and furthermore give an opportunity to improve client fulfillment and execution.

5.4.8 Compatibility Testing

Compatibility of our website is a very important testing aspect. By Compatibility testing check our software is it suitable to Browser compatibility, Operating system compatibility, Mobile browsing, Printing options.

5.5 Test Results and Reports

We use some testing methods for checking our web application. And after applying these methods, grades and remarks are given below.

Table 5.1: Test Results and Reports

SL#	Type of Testing	Grade	Remarks
01	Unit Test	10	8
02	Link Test	10	8
03	System Test	10	7
04	Usability Test	10	9
05	Compatibility Test	10	8
06	User test	10	9
07	Security Test	10	9
08	Performance Test	10	8
09	Functionality Test	10	9

CHAPTER 6

CONCLUSION AND FUTURE SCOPES

6.1 Discussion and Conclusion

The world is incorporating a more prominent system with advancement. People like to get information from their home. They couldn't care less to ask people which is better, where it is, and considerably more data that necessities to go ahead to try out institutes, hospital, and book hotel and visit tourist places. This web application will help by giving full detail data, separating, correlation of institutes, hospitals, places, hotels and so on. By using our web application people can without a doubt settle on their choice to proceed with no other or people manage. So why so late. Start to make your very own plan right now and push ahead with no fearful.

6.2 Scope of Further Developments

The principle point of our venture was to build up a web-based application for the students, patients, and tourists of our nation along overall which can assist them with choosing the best services in Bangladesh. There are some future facilities of our application is given bellow,

- Later on, we will endeavor to give greater security to our website so it can't be hacked.
- Later on, our website will give administrations including all dialects. With the goal that any client can utilize our framework effectively from any nation.
- Right now, we simply center around our country "Bangladesh" yet in future we will include data around the globe.
- We have a plan to create a feature where the user can share and add their listing in our side.
- We will make an android application and IOS application to connecting with each individual.
- We will list a wide range of data of all institutes, hospitals, hotels and tour places.

- We are planning to add more services like shopping center, job places and so on.

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APPENDIX

Front End & Back End Sample Code:

◀=====Admin panel hospital relational model =====▶

```
<?php
namespace App;
use Illuminate\Database\Eloquent\Model;
class Hospital extends Model
{
    protected $fillable = [
        'name',
        'estDate','phone','email','air_conditioning','total_doctors','total_departments','user_id','
        world_ranking','bangladesh_ranking','views','main_img','gallery_img_1','gallery_img_
        2','chancellor','ownership_type', 'address','district_id','sub_district_id','isActive'
    ];
    public function departments()
    {
        return $this->belongsToMany('App\HospitalDepartment',
        'hospital_department_relations')->withTimestamps();
    }
    public function hospital_departments()
    {
        return $this->hasMany('App\HospitalDepartmentRelation', 'hospital_id');
    }
    public function hotels()
    {
        return $this->belongsToMany('App\Hotel', 'hospital_hotels')-
        >withTimestamps();
    }
}
```

```

}
?>
<=====Service Provider for get the data=====>
use View;
class AppServiceProvider extends ServiceProvider
{
    public function boot()
    {
        Schema::defaultStringLength(191);
        View::composer('forum.master',function ($view){
            $view->with('categories',Category::withCount('forumPosts')-
            >where('isActive','Active')->orderBy('name','asc')->get());
        });
    }
}
<===== Routes to get the data===== >
Vue.use(VueProgressBar, options)
/*End progress bar*/
/*Vue routes*/
const router = new VueRouter({
    mode: 'history',
    routes // short for `routes: routes`
});

```

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